

Appl. No. : 10/027,195
Amendment and RCE dated : December 17, 2004
in Reply to Advisory
Action dated : September 16, 2004
And Final Office Action dated : May 21, 2004

Attorney Docket No.: 109878.125 US1

REMARKS/ARGUMENTS

I. Status of the Application and Summary of the Office Action

This paper is filed in response to the Final Office Action, mailed May 21, 2004, and the Advisory Action, mailed September 16, 2004 (collectively, "the Actions"). Reconsideration of this application is respectfully requested. Consideration of the accompanying Supplemental Information Disclosure Statement is also requested.

Applicant notes that the amendments contained in the Amendment and Response filed on August 3, 2004 have not been entered. Applicant requests non-entry of the Amendment and Response filed on August 3, 2004, as new amendments have been made in this paper. All changes indicated and status identifiers in this paper are relative to the claims after the last entered amendment, filed March 22, 2004.

Claims 1-39 are presented for examination, and claims 40-41, which were previously withdrawn in response to a restriction requirement, have been cancelled. Applicant reserves the right to pursue the subject matter of the cancelled claims in this or a future related application. The designation for claim 33 has been corrected to reflect that it was previously presented (and is not "original"). Claims 1, 31, 32, 33, and 38 are independent.

The Actions reject the independent claims (except for claim 32) as unpatentable under 35 U.S.C. § 102(b) in view of Fish (U.S. Pat. No. 6,035,294) alone. The Actions reject the dependent claims in view of Fish alone, or Fish in combination with Kortge (U.S. Pat. No. 6,446,068 B1). The Actions reject claim 32 as unpatentable under 35 U.S.C. § 102(e) in view of Wical (U.S. Pat. No. 6,038,560).

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II. Rejection of Claims 1, 31, 33 and 38, and Dependent Claims over Fish, Alone or Combined with Kortge

Claims 1, 31, 33 and 38, and the claims depending therefrom, are not anticipated by Fish under 35 U.S.C. § 102(b), or obvious under 35 U.S.C. § 103(a) in view of Fish in combination with Kortge, because Fish does not disclose all of the elements of each independent claim. Applicant will focus this discussion on claim 1, which relates to a method for searching a collection of items, wherein each item in the collection has a set of properties. The claim includes “obtaining a query composed of a first set of one or more properties.” The claim goes on to recite “obtaining a result based on applying a distance function to the query and an item in the collection having a second set of one or more properties.” The other independent claims have similar elements relating to the distance function.

As an example, the patent describes a movie database, in which the properties might include the director, the genre, and the star of the movie. A query might be, for example, movies in which the director is Stephen Spielberg, the genre is action, and the star is Richard Dreyfuss. Thus, in this example, the first set of one or more properties is {director = Stephen Spielberg, genre = action, star = Richard Dreyfuss}. The item in the collection might be the movie *Raiders of the Lost Ark*, in which the director is Stephen Spielberg, the genre is both action and adventure, and the stars are Harrison Ford and Karen Allen. Thus, in this example, the second set of one or more properties is {director = Stephen Spielberg, genre = action, genre = adventure, star = Harrison Ford, star = Karen Allen}.

The last two paragraphs of claim 1 include two elements relating to the result based on applying the distance function. First, “obtaining a result includes determining a third set of properties common to the first set of one or more properties and the second set of one or more properties.” Using the above example, the third set of properties common to the first set of one or more properties and the second set of one or more properties is the set {director = Stephen Spielberg, genre = action}. The other properties in the query or the movie in this example are not common to both.

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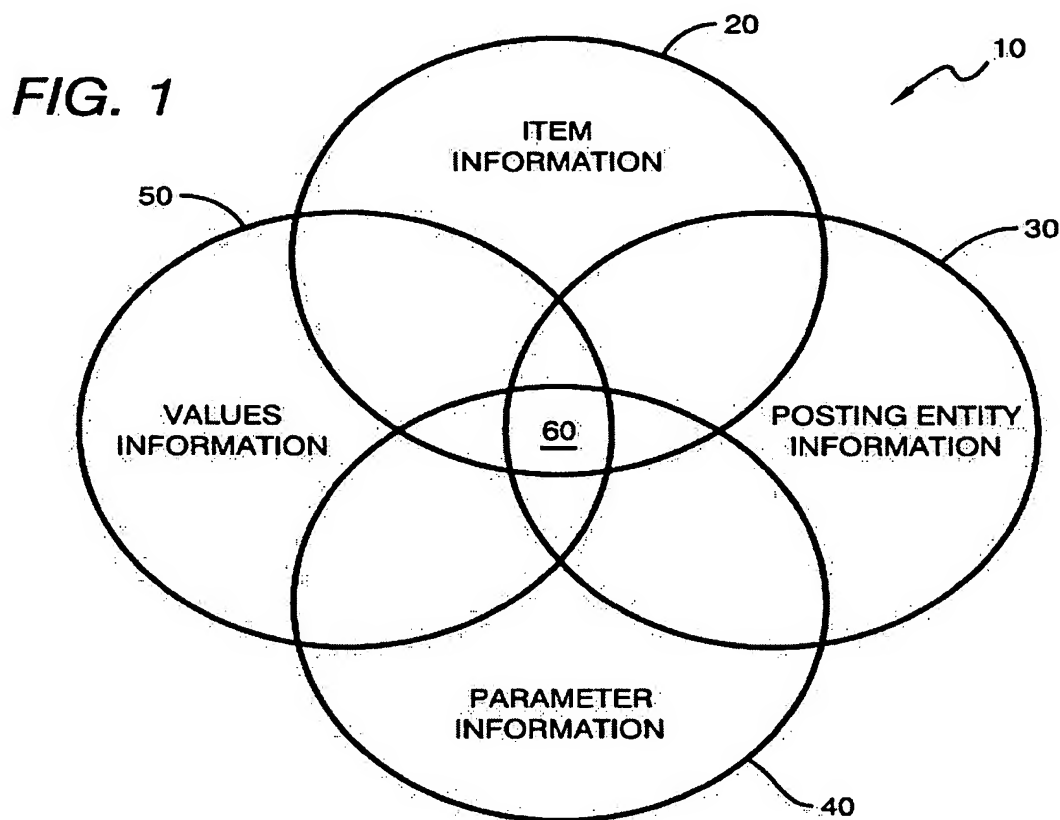
Finally, the claim provides that “the distance function determines a distance between the query and an item in the collection based on the number of items in the collection that are associated with all of the properties in the third set of properties.” This is a separate element from determining a third set of properties. Using the above example, the distance between the query and *Raiders of the Lost Ark* is based on the number of items in the collection (in this example, the collection is a movie database) that are associated with all of the properties in the third set of properties. That is, the number of movies in the collection in which the director is Stephen Spielberg and the genre is action.

Thus, the last two paragraphs of claim 1 include both “determining a third set of properties common to the first set of one or more properties” and determining “a distance between the query and an item in the collection based on the number of items in the collection that are associated with all of the third set of properties.”

In the Actions, particularly the Advisory Action, the Examiner cited to various elements in Fish as the “first” and “second” “set of one or more properties.” The Examiner cited to the “information” shown in Figure 1 as either the first or second set of one or more properties. Fish describes Figure 1 as a “Venn diagram of data in a preferred database.” The discussion of Figure 1 states, in its entirety:

In FIG. 1, a preferred database 10 generally includes four intersecting sets of information, item information 20, posting entity information 30, parameter information 40 and values information 50. The intersection 60 of these sets 20, 30, 40, 50 represents records of particular interest to a user.

These terms are not described elsewhere in the patent. Figure 1 is reproduced below:



Applicant submits that this disclosure regarding the information simply is insufficient, under any reading, to teach or suggest the elements of claim 1. In fact, the meanings of the terms “item information,” “posting entity information,” “parameter information,” and “values information” is not clear from the patent, but would appear to refer to different types of information found in a database. There is no suggestion that these types of information refer to a set of properties, e.g., for a query or for an item in a collection, as opposed to making a general reference to the types of data found in a database.

The sets of properties are also equated to various other elements in the Advisory Action. Under any reading of the sets of properties, Fish does not also teach determining a distance “based on the number of items in the collection that are associated with all of the third set of

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properties.” The discussion around Figures 3B and 3C, for example, shows an entered item description (134) and entries in which the “major class” 136B, the “minor class” 136C, or the “item description” 136D in an item classification hierarchy matches the entered item description. The “frequency” column in Figure 3 (also described as “usage”) relates to the extent of past usage of various choices (*see, e.g.*, col. 5, lines 26-46).

This is not, and could not be, a reference to the “number of items in the collection that are associated with all of the properties in the third set of properties,” as provided in the last paragraph of claim 1. Fish does not teach or suggest this element. In, for example, Figure 3B, the item description “sport utility vehicles” is common to all of the rows. If the “frequency” column referred to the number of items in the collection associated with “sport utility vehicles,” then the “frequency” values in column 126E of Figure 3 would need to be the same for each row in a particular Figure because in each row the frequency value would refer to the number of items in the *collection* having a certain set of properties – in this example, the set {sport utility vehicles}. However, the frequency value is different in different rows, demonstrating that it could not refer to the number of items in the collection having a certain set of properties as in the claim.

Applicant has fully considered the arguments presented in the Advisory Action but claim 1 is not believed to be anticipated by Fish for the above-stated reasons. Independent claims 31, 33 and 38 contain limitations reciting a similar distance function (or its steps). Accordingly, Fish does not anticipate independent claims 1, 31, 33 and 38, or dependent claims 2-13, 15-23, 26 or 34. In addition, Kortge is not cited for and does not provide the elements of the independent claims that are missing from Fish. Accordingly, claims 14, 24, 25, 27-30, 35-37, and 39 are not obvious over the cited combination. Applicant respectfully requests that the rejections relying on Fish be reconsidered and withdrawn.

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III. Rejection of Claim 32 over Wical

Claim 32 is not anticipated by Wical under 35 U.S.C. § 102(b) because Wical does not disclose all of the elements of the claim. Claim 32 is directed to “a method for analyzing the relationship between two items in a collection of items, wherein each item in the collection is associated with a set of properties.” Claim 32 involves applying a version of the distance function in the following step: “determining the degree of commonality between the two items as a function of the number of items in the collection that are associated with all of the properties with which the two items are commonly associated.” Wical lacks any description of at least this last step.

Claim 32 was first rejected over Wical in the Office Action mailed on September 25, 2003. The Office Action cited generally to three sections of Wical in support of the rejection: col. 9, line 54-col. 10, line 35; col. 12, lines 18-45; and col. 17, lines 39-61.

The cited portions of Wical are directed primarily to a method for expanding a query so that it can be mapped to concepts in a knowledge base. Wical discusses, for example at col. 9, line 54 - col. 10, line 35, a number of different concepts such as “themes,” “groupings,” “terms,” “documents,” “categories,” and “subcategories.” In the Office Action, it appears from the passages that are cited that different concepts in Wical are alleged to correspond to the presently claimed “properties” at various times, such as “categories” or “themes,” to support the rejection for claim 32.

Under any reading, there is no teaching in Wical of at least the last step of claim 32. Of the cited portions of Wical, only column 12 describes measuring a distance. In column 12, Wical describes using “distance weights” to “provide a quantitative value to indicate the strength of the linguistic, semantic, or usage relationship *between two categories/terms*.” (Wical, 12:20-22 (emphasis added).) The distance weights in Wical are between (any two) single, different “categories,” wherein categories are part of a document classification system, *not between two documents*, and are not based on “the number of items in the collection that are associated with all of the properties with which *the two items* are commonly associated” (emphasis added) as is

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presently claimed. In column 12 of Wical, the number of common documents for two categories indicates the strength of the relationship between the two categories only. Wical does not teach or suggest how this could be applicable to sets of properties that may comprise a plurality of properties or for evaluating the distance between two documents, let alone disclose the particular method recited in claim 32. Accordingly, column 12 of Wical does not teach or even suggest the method recited in claim 32.

These deficiencies are not addressed in the other cited portions of the Wical specification. The cited portion of columns 9-10 and column 17 do not discuss measuring a distance or applying the distance weights from column 12. They also appear to apply to different technical aspects of Wical's system than column 12. The combination of these sections of Wical fails to supply the elements missing from column 12.

Wical does not teach or suggest the claimed steps of claim 32. Accordingly, claim 32 is not believed to be anticipated or obvious in view of Wical. Applicant respectfully requests that the present rejection be reconsidered and withdrawn.

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CONCLUSION

For the reasons stated above, Applicant respectfully submits that the rejections contained in the Final Office Action mailed on May 21, 2004 have been overcome and that the pending claims are in condition for allowance.

Please deduct the fee for the present RCE, set forth in § 1.17(e), from our Deposit Account No. 08-0219. No extensions of time are believed to be required. If any extensions of time are found to be required to maintain the pendency of the application, please charge Deposit Account No. 08-0219. A Supplemental Information Disclosure Statement is submitted herewith. No other fees are believed to be due pursuant to § 1.97(b)(4), as the Supplemental Information Disclosure Statement is submitted concurrently with this RCE.

Please apply any charges not covered, or any credits, to Deposit Account No. 08-0219. The Examiner is encouraged to telephone the undersigned attorney for the Applicant to resolve any outstanding issues.

Respectfully Submitted,


Ayla A. Lari
Registration No. 43,739

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WILMER CUTLER PICKERING
HALE AND DORR, LLP
60 State Street
Boston, MA 02109
617-526-6000 (telephone)
617-526-5000 (facsimile)